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ABSTRACT

This paper presents some suggestions about and evidence on how research theories from social psychology can be used to improve the operation and effects of short term educational programs whose objectives include the education or reeducation of individuals. The document is intended for people connected with the kindergarten through college educational system who are responsible for producing changes geared to improving the functioning of educational programs. The authors demonstrate that the use of temporary systems concepts in managing short term conferences, institutes, workshops, and meetings of from three days to eight weeks' duration can significantly improve the effectiveness of these events. The document differentiates between temporary and permanent systems, presents a conceptual model of a temporary system, explains terminology, cites relevant literature, and gives specific examples taken from different programs to illustrate how systems concepts can be applied. The paper concludes with a checklist that summarizes the kinds of actions that might be made by a manager or a director of a temporary system. (Author/DN)

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*The Application Of Temporary System Concepts To Effective Planning And Management Of Short Term Educational Programs**

By Robert Bernoff, Emily Girault and Mary Budd Rowe

**Prepared under a grant from the National Science Foundation*

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FOREWORD

Some scientists, science educators, mathematicians, mathematics educators, social scientists and social science educators are making extensive use of data, current research and theories in learning psychology to improve, design and evaluate curriculum materials. Yet a corresponding body of information on the operation of the social systems which try to implement curricula is often ignored. This paper presents some suggestions and evidence for how research theories from social psychology can be useful in planning and managing a range of short term educational programs.

The original conceptual work of Miles (1964) and others (referred to throughout this paper) indicates that the application of social science theory has potential for improving the effectiveness of short term intensive learning experiences. It is interesting that many of the ideas and much of the research which will be referred to throughout this paper have been available for almost ten years and yet they have been utilized on a limited basis.

During 1971 and 72 the National Science Foundation supported three temporary system management laboratories staffed by a team of social and physical scientists and attended by directors and staffs of National Science Foundation supported projects (Resource Personnel Workshops, Summer Institutes and Cooperative College School Science Programs). The purpose of these workshops was to provide the participants with a knowledge of temporary system management techniques which might be useful in the operation of their funded projects.

For a long time people have been planning and operating workshops, institutes, conferences, etc. without applying much of the systematic knowledge available from social sciences. This paper was produced in the hope that the concepts and ideas presented would serve to stimulate planners to think about short term systems in new ways.

Readers should realize that the specific suggestions, examples and references are intended only to illustrate concepts and are not meant to be prescriptive.

This paper consists first of an introduction (Section I), whose objective is to explain the differences between temporary systems and permanent systems. Section II presents the conceptual model of a temporary system, explains terminology and cites relevant literature. In section III specific examples taken from different programs are used to illustrate the ideas presented in section II. Finally in section IV there is a check list which summarizes the kinds of actions which might be made by a manager or director of a temporary system.

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I. INTRODUCTION

The purpose of this paper is to present some ways in which social science knowledge can be used to improve the operation and effects of short term programs whose objectives include the education or reeducation of individuals. The intended audience are people connected with the kindergarten through college educational system who are responsible for producing changes which improve the functioning of ongoing educational programs.

As will be shown in this paper the use of temporary system concepts in managing short term conferences, institutes, workshops and meetings of three days to six or eight weeks duration can significantly improve the effectiveness of these events.

A. Some Restrictive Properties of Ongoing Systems

"For many reasons permanent systems--whether persons, groups, or organizations--find it difficult to change themselves. The major portion of available energy goes to: (1) carrying out routine goal directed operations and (2) maintenance of existing relationships within the system. Thus the fraction of the energy left over for matters of diagnosis, planning, innovation, deliberate change and growth is ordinarily very small." (Miles 1964 p.443).

In ongoing educational establishments, which will be referred to as permanent educational systems, just about all of the individual's time and energy is invested in system maintenance; working towards system imposed and recurrent short term goals, and protecting the individual's role in the system. The following statements are typical of teachers' goal related responses in permanent systems where the day to day press of events prevents much long term planning or enthusiasm for new programs:

The students must know this work before the testing period begins.

My grades must be in by next week.

The principal wants complete lesson plans for the next week by noon on Friday.

The syllabus for our Chemistry course must be given to the curriculum committee.

I must order materials for next year before next Monday.

The following statements are typical of role related factors which can function to restrict change:

If the class is noisy, it will look like I have lost control.

If I don't lecture people will think I don't know the material.

If I try to change the way we are doing things I'll be regarded as a troublemaker.

My job is to teach. Curriculum decisions are made by administrators.

The department chairman arranges the schedules so I can't hold a class for more than one hour.

If you allow the students to speak out without raising their hands, things will get chaotic and you will be regarded as a poor teacher.

As these few examples illustrate, making changes in permanent educational systems can be difficult.

B. A Few Facilitating Properties of Temporary Systems

In his paper "On Temporary Systems" Matthew B. Miles describes some of the special characteristics of systems whose members hold

from the start the basic assumption that at some more or less clearly defined point in time the system will cease to be. He points out that these temporary systems operate in a very different manner from durable social structures such as school systems, colleges, government agencies, churches and industrial corporations, which he calls permanent systems (Miles 1964).

In a temporary educational system, where people step apart for a time from the permanent system, participants are able to suspend their responsibilities to the multi goals of the permanent system and concentrate on a few new specific short term goals. They are also temporarily removed from the normal role expectations of his co-workers and supervisors and are free to try new ideas and methods without the fear of serious consequences when things do not work. A properly operated temporary system provides a milieu for the birth of innovative practices. In an isolated temporary educational system members are freed from regular classes, deadlines, due dates, committee meetings, telephone calls, secretaries, principals, deans and often even families. They are able to concentrate all efforts on the goals and task at hand. Since the participant can regard the temporary system as "not for keeps," they often feel freer to experiment, provided that the ground rules for such systems include experimentation with new ideas and ways of teaching and learning.

People participating in the temporary educational system can make substantial changes in their philosophies and methods of education. If they are supported when they return to the permanent system, these changes can be transmitted to the permanent system.

It may not be a coincidence that a significant proportion of successful efforts at educational innovation involve the creation of temporary systems. The advantages offered by temporary systems can be maximized if directors become knowledgeable about their spcial properties. For example, some studies of the back-home behavior of participants in National Science Foundation supported programs and the performance of students of these participants, indicate that much more could have been achieved had the directors of these programs applied some of the temporary system concepts (to be described later in this paper) to the design of the programs they conducted. (Sadler; Blankenship 1964; Handley and Bledsoe; Cooley 1965; Crumb 1965; Trent 1964).

The directors of these NSF programs may have consciously or unconsciously assumed that the normal constraints of the permanent system applied to their NSF programs, and failed to take advantage of some of the special properties of temporary systems.

There is evidence that when NSF directors do employ the temporary system concepts, outcomes are considerably increased. (Merkle 1970; Rowe 1971; Girault 1971; McCleod 1971; Bernoff 1971; Crumb 1973).

C. Temporary System Concepts As A Mental Model

In any field a mental model gives the researcher, developer, or implementer a conceptual framework which guides him in planning and conducting operations. For example, knowledge of the overall Kinetic Molecular Conceptual Model of matter gives the physical scientist insight into how a system functions. The model makes the scientist more aware of which variables may be most likely to cause changes in a system and the concepts associated with the

model are powerful tools for interpreting results and using them as the basis for modifying experimental procedures.

In a similar manner, the conceptual models of human social systems provide the social scientist with insight on how they operate and clearer access to the variables most likely to cause changes.

The concepts are also powerful tools for interpreting results and using them as feedback to modify procedures in operating social systems.

As the physical scientist becomes more knowledgeable of the ramifications of the Kinetic Molecular Model and its implications, he expects different classes of reactions in solids than in gases. He plans different kinds of procedures for solids versus gaseous systems.

As a person becomes more knowledgeable of the ramifications of Miles' conceptual model of temporary systems and its implications, he begins to expect different classes of reactions in permanent as compared with temporary systems. He plans different kinds of procedures for these different systems.

Any person is potentially able to plan and operate more effectively if he is knowledgeable in the field of interest. Anyone who attempts to cause changes in social systems is more likely to be able to plan and operate more effectively if he is knowledgeable of the conceptual model of temporary systems.

D. Defining A Temporary System

In this paper a temporary educational system exists when a group of educators meet together for a defined period of time under circumstances in which they are relieved from meeting the daily duties of

their permanent system, in order to achieve a specific set of goals. An isolated temporary educational system is a temporary system in which the members are living and working in a place physically removed from their regular home environment. The term educator is used to mean an elementary, secondary, or college teacher, administrator or consultant. For example, the National Science Foundation Science Education Programs listed below would all be considered examples of temporary educational systems: (All but the first are normally of the "isolated" type).

1. Cooperative College-School Science Programs
2. Summer Institutes for College Teachers
3. Administrators Conferences
4. Short Courses for College Teachers
5. Summer Institutes and Conferences for Secondary School Teachers
6. Special Projects in Pre-College Science Education (such as Resource Personnel Workshops)

All of these National Science Foundation temporary educational systems are intended to bring about changes in the individuals who participate in them. These individuals are often expected to effect changes in the permanent systems with which they are associated.

Some scientists, science educators, mathematicians, mathematics educators and social science educators are making extensive use of data, current research and theories in learning psychology to improve, design and evaluate curriculum materials. Yet a corresponding body of information on the operation of the social systems which try to implement curricula is often ignored. This paper presents some

suggestions and evidence for how research and theories from social psychology can be useful in planning and managing a range of short term educational programs.

II. A CONCEPTUAL MODEL OF TEMPORARY EDUCATIONAL SYSTEMS

The director of a National Science Foundation program who manages a temporary educational system designed to implement changes in permanent educational systems may wish to consider five phases of operation. These phases are:

A. Planning a Temporary System

B. Building a Temporary System

C. Operating a Temporary System

D. Closing a Temporary System

E. Following up a Temporary System

These phases of system operation and some specific concepts to consider in each phase are outlined in the Diagram of Temporary System Concepts (pages 8a and 8b) and explained below:

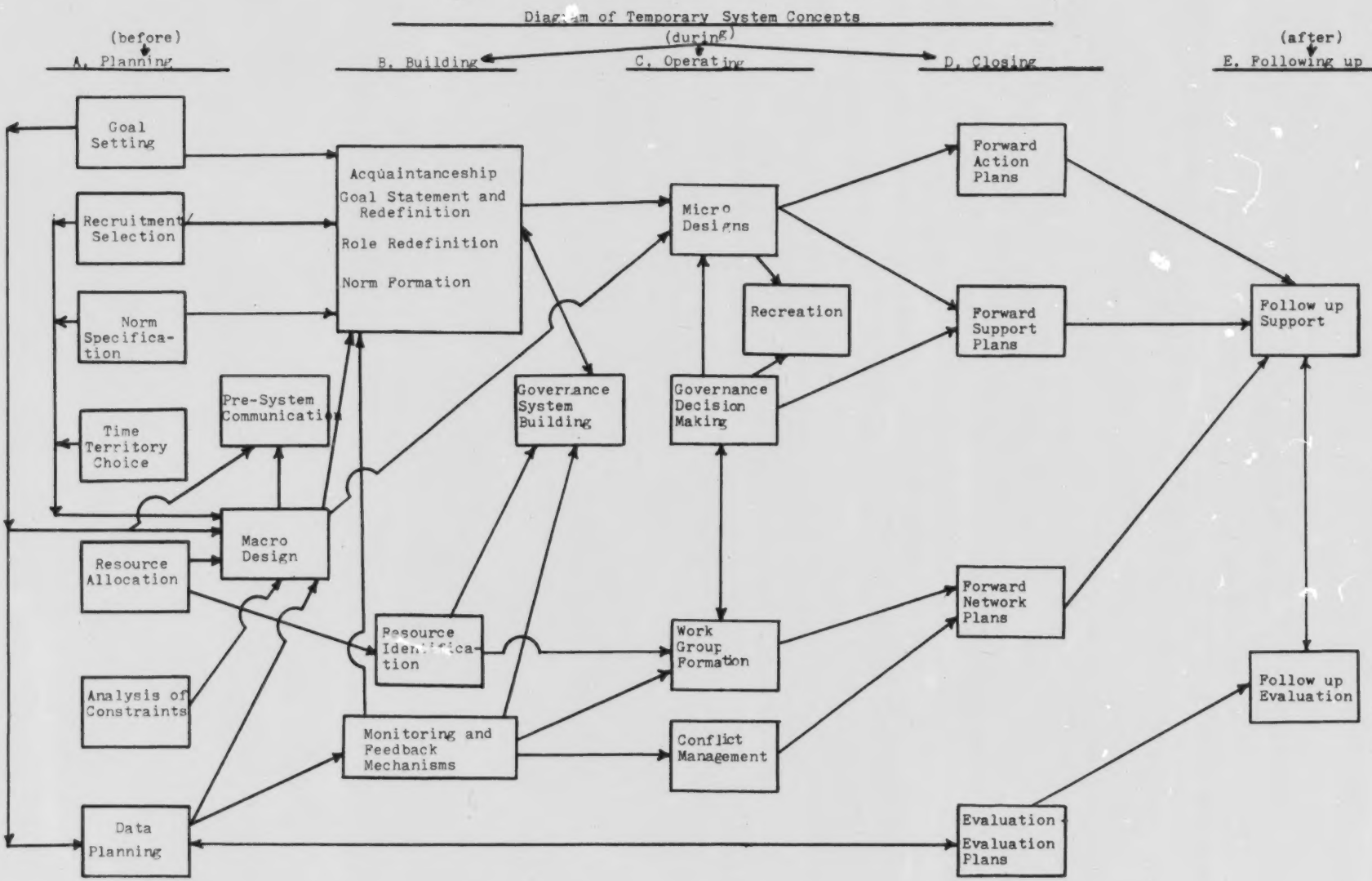


Diagram of Temporary System Concepts
(before)
A. Planning
(during)
B. Building
C. Operating
D. Closing
(after)
E. Following up
Goal Setting
Recruitment Selection
Norm Specification
Time Territory Choice
Resource Allocation
Analysis of Constraints
Data Planning
Pre-System Communicati
Macro Design
Acquaintanceship
Goal Statement and Redefinition
Role Redefinition
Norm Formation
Resource Identification
Monitoring and Feedback Mechanisms
Governance System Building
Micro Designs
Recreation
Governance Decision Making
Work Group Formation
Conflict Management
Forward Action Plans
Forward Support Plans
Forward Network Plans
Evaluation
Evaluation Plans
Follow up Support
Follow up Evaluation

A. Planning a Temporary System

Many arrangements must be made well in advance of the first meeting of a temporary system. If the director is able to arrange for a planning meeting of all of the proposed staff, greater use of staff resources can be assured. When the staff plans jointly with the director, utilizing pre-conference data collected from the prospective participants, staff cohesiveness is increased, more contingencies can be considered and staff commitment to the temporary system goals is developed. At pre-planning meetings the staff engages in the following operations:

1. Goal Setting:* The process of stating what participants should be able to do by the end of the temporary system and specifying what effects (if any) should result in permanent systems.

Here the main idea is for the staff to specify clearly the minimum changes expected as a result of the forthcoming temporary educational system. These may be changes in the participants and their relationships as well as in the permanent systems to which they will return. Changes may be specified in terms of science content and concept knowledge, process, attitudes, teaching methods, interpersonal relationships, etc. and they may include specific action commitments made by participants themselves, as well as their school or college permanent systems.

As mentioned earlier, one of the main advantages of a temporary system is that participants are free from the pressure of the everyday multi-goals of the permanent system. The limited range of the temporary system goals, if they are clearly stated and achievable,

*Examples given in Section III.

encourages a high degree of persistent effort by the participants toward achieving these goals. The time limited aspect, i.e. the knowledge that objectives are to be accomplished in a fixed time period, helps participants focus on these immediate attainable goals. The chances of successful goal attainment are much higher than in the permanent system because the goals are short term in nature and the entire time and energy of participants can be deviated exclusively to their attainment. Thus the goals should be of limited range, clearly stated and reasonable to achieve in the time available.

2. Recruitment/Selection:* The process of identifying criteria for choosing participants; the enlisting of interested applicants and the choice of who shall attend the temporary system.

Membership in temporary systems is usually limited to highly specified classes of personnel. Conditions for membership should be clearly defined. The careful specification of personnel, made possible by the narrow goal range described above, encourages further goal focus, minimizes socialization problems, reduces internal conflicts and so ensures more productive work toward achieving the goal.

People selected to participate in the temporary system normally have a high proportion of common goals and problems. As they work toward the achievement of goals and solutions to problems, their shared experience leads to the development of a sense of community which is characterized by increasingly effective communication. It is usually difficult to incorporate late arrivals and part-time participants since they have not shared in the early critical stages of system development.

*Examples given in Section III.

3. Norm Specification:* The Process of stating and recording in writing a list of hoped for social behaviors which the staff would like to characterize the temporary system. Norms are to social systems what habits are to individuals. Therefore, they are often more implicit than explicit.

A norm is a shared idea of appropriate behavior which is common to a group whose members have some social interaction together. There is usually some kind of negative sanction attached to the violation of a norm. Any going social system develops regulatory norms which define and govern behavior. Once established norms are difficult to change so it is important for the staff to consider in advance what it regards as desirable norms. Since, as Miles remarks, "Temporary systems are new, miniature, temporary and protected," it seems easier to develop new norms which encourage creative thought and behavior. "If the norms are strong, they tend to become internalized as attitudes in the person, or carried over as practices into permanent organizations." (Miles 1964, p. 473).

Norms common to well designed temporary systems are often counter to the norms for the same people in their permanent system. Four such norms are described below:

Egalitarianism - The feeling of, we all have the same status in this new system and, I don't have to worry about where I am in the hierarchy like I do back at my school. This is in contrast to the conditions which exist in most permanent systems, ideas can be originated by anyone, can flow freely in any direction and can be evaluated by everyone.

*Example given in Section III.

Authenticity - In the temporary system time is at a premium. It rapidly becomes expected that people will be honest, frank and open, and trust everyone else to be the same. Expression of feelings is legitimate. This temporary system norm is not typical of most permanent systems where openness is discouraged and where competetiveness, secretiveness and isolation prevail. (Argyris 1962).

Inquiry and Innovativeness - This norm is particularly pertinent to temporary educational systems. A well designed temporary system encourages members to be curious and to seek new solutions to problems. Novelty and innovation are valued. The narrow goal focus, good communication and egalitarianism of the temporary system seems to support the members in these new norms and insulate them from the anti-innovative norms of the permanent systems from which they come.

Effortfulness - In contrast to the permanent system where longer term goals are involved, members of a temporary system become acutely aware of the limited time to achieve their highly specific goals. Thus they tend to work extremely hard, in a focused way using all available energy in an attempt to achieve their goals.

While the program director and staff can plan for the norms they wish to develop in the temporary system they should understand that norms can not be established by decree. However, in the planning and conduct of specific instructional activities the staff can consider how each activity will reinforce or detract for the development of desired norms. Both the design of activities and the behavior modeled by the staff can influence the norms which develop. (Hare 1962, chapter 2).

4. Data Planning: The process of stating what kinds of information will be collected from the participants before, during and after the temporary system. (The word data is used here to mean any information about behaviors, attitudes, learnings and/or procedures which can be used in making decisions about a temporary system.

Because the temporary system is time limited, it must be operated efficiently. Information is needed before, during and following the systems existence for planning, steering, evaluation and support of participants back in the permanent system. The staff must decide what information is needed and how it will be obtained. In the temporary system it is possible to develop open exchange of information, an asset which is often not available in the permanent system. Participants need to realize that they are not penalized for criticism and that information they supply is utilized to improve operation of the system. In short, a norm of open exchange needs to be established.

Some data that will prove helpful in planning the temporary system is usually collected before participants arrive. This may include biographical information, their job description and reasons for attending the proposed temporary system.

The staff in their planning must also consider what kinds of feedback data will be used to monitor and steer the system during its operation. Consideration must be given to how this data will be collected, summarized and reviewed with the participants so that they are aware of common group perceptions and how their ideas and

perceptions can change the operation of the temporary system. This kind of data collection and its use is discussed later in this paper under the heading of "Monitoring and Feedback Mechanisms."

The staff should also consider in the planning stage how the temporary system will be evaluated. Reference to clearly stated goal statements can aid the staff in making decisions about what kinds of evaluation data should be collected before, during and after the temporary system.

5. Time and Territory Choice: The act of selecting the dates, location and actual physical arrangements for a proposed temporary system.

In selecting the site of the temporary system, staff should consider facilities for the following:

a. Work - laboratories, field trips, large and small group discussions, quiet study, access to student population for demonstration or micro-teaching, etc.

b. Recreation - play, exercise, relaxation, entertainment

c. Housing and meals

Particularly if the temporary system is not of the isolated type, staff should consider how to minimize distractions and so encourage goal focus and effortfulness.

The ideal time for the temporary system to be held is close enough to when the participants will actually use what they are learning, to add realism and immediacy to the work of participants.

6. Resource Location and Allocation: The act of stating what human resources, materials, information and dollars are necessary for operation of the temporary system. The relationship between these specific resources and the temporary system goals should be clear.

It is most important for the staff to consider the human and material resources required for the operation of the temporary system. How much is it going to cost in time, money and energy? Possible human resources are staff, consultants, laboratory and other support personnel, students for participants to teach and the participants themselves. Many times staff may neglect the wealth of resources represented by the participants themselves. Their expertise should be utilized in helping each other and the staff.

Material resources include such things as kits, T.V. and audio tape machines, special equipment, paper, pencils, books, cars, buses etc.

Staff must try to anticipate where and when various resources may be needed in different phases of the temporary systems operation. The probable state of staff and participant energy should also be considered when planning various activities. If activities are too tightly scheduled, staff and participants may tire too early in the life of the system.

7. Macro Designing:* The process of preparing an overall plan of the probable flow of activities during the operation of the temporary system.

The macro design is the general plan of operation. It shows the staff and participants the overall flow and sequence of activities called micro designs. While a highly specified macro design complete with all design activities and an exact time schedule may be very comforting to the staff and may even be helpful in getting

*Examples given in Section III.

a proposal funded it can lead to disaster. If staff and participants are locked into a tight time schedule and prearranged activities it may not be possible to shift the program to fit the actual needs of the participants. This can destroy the norms of egalitarianism, sense of control over one's fate and authenticity. Much of the value of being in a temporary system can thus be lost.

The staff may make a macro design and then plan a number of contingency micro designs for each phase of the macro design. These micro designs or new ones are then used as needed with decisions based on feedback from participants and continuing diagnosis by the staff.

Now, it should be pointed out that the macro design need not be completely fluid. There may be some unavoidable fixed portions of the schedule involving the use of students, lab equipment, etc. The point is to keep the macro design as fluid as possible.

8. Analysis of Constraints:* <u>The process of stating the assumed restrictions on the operation of the temporary system and considering whether these restrictions can be bypassed.</u>

During the planning of the temporary system the staff will make assumptions about various constraints to its operation. It is wise to analyze what assumptions have been made, to list them, and then to question whether they are real and unchangeable constraints for the temporary system. Remember, many constraints which apply to the permanent system can be circumvented in the temporary system.

*Examples given in Section III.

After analysis and checking of all assumed constraints, it may be wise to list those which are real and unavoidable and to make this list available to the participants.

9. Pre-System Communication:* <u>The process of listing what information will be transmitted to the participants prior to the start of the temporary system. The act of transmitting this information.</u>

Once the participants have been selected, what information should they receive prior to their arrival at the temporary system? Information sent to the participants usually falls into the two general categories of housekeeping and program information.

Housekeeping information includes details about times, places, family arrangements, living arrangements, travel arrangements, stipends etc. This information should be as explicit as possible.

Program information should include a clear statement of the temporary system goals and commitments participants are making when they agree to attend. Lists of probable participants, a brief macro-design, and suggested materials for participants to bring may also be helpful.

A pre-conference questionnaire or telephone interview to collect data to help plan a macro design is also a communication and it can give the participants some ideas about what to expect and begins to establish the norm of open communication and staff responsiveness to participant needs.

*Examples given in Section III.

In designing all pre-conference communications, the staff should consider what impressions these contracts are likely to give and how they may affect the development of norms in the temporary system.

B. Building a Temporary System

In the permanent system the participant knows "where he stands" and what is expected of him. On entering a temporary system he needs to answer a number of questions in order to adjust to the new situation. Productive work usually does not begin until these questions have been settled in the participant's mind:

Who is here? (Acquaintanceship)

What resources are here? (Resource identification)

Why are we here? (Goal redefinition)

What is expected of me? (Role redefinition)

What is appropriate behavior here? (Norm formation)

How are decisions made here and can I affect them? (Governance)

While participants generally come with the intent of being productive, it turns out that the level of input will be greatly increased once they have satisfactory answers to the questions above. These questions are discussed in some detail below.

Small group theory tells us that individuals entering a task group assign priorities to four problems and confront these problems in the following order. First the individual must deal with his own problems of individual role and membership in the group. Second, he works to clarify his own individual task and goals in the group. The member is then ready to broach the cluster of social-emotional group problems including the establishment of group structure,

norms and the "hidden agenda" anxieties and unstated objectives shared by many members.

Each of these three problems is so demanding and of such priority that they must be somewhat resolved before members are able to invest energy in working on the fourth problem, that of the group task. (Hare, pp. 19,20), i.e. the major goals to be achieved at the meeting.

The time period from the start of the temporary system until the participants have satisfactorily answered the above questions, can be regarded as the system building phase of the temporary system.

1. Acquaintanceship:* The process in which participants identify the kinds of human resources present in a group and build trust in the integrity and competence of other members.

In the permanent system people deal with each other in terms of their system defined roles. For a temporary system to more fully utilize the human resources present, people should get past the role to the individual. The staff can arrange situations which allow people to deal with each other not in terms of "he is a prinipal" but in terms of what can I find out about him, what does he have to contribute to me and to this group.

One technique for accomplishing this is to arrange for participants to work on tasks with a number of differently constituted small groups early in the program. (Newcomb 1962; Schein et. al. 1961).

2. Goal Statement and Redefinition:* The act of providing the participants with a written list of the proposed objectives of the temporary system stated in terms of what they should be able to

*Examples given in Section III.

do by the end of the temporary system and what they are expected to do in the permanent system as a result of the temporary system experience. The process of modifying the goals originally stated as a result of mutual experience during the temporary system as the process of goal redefinition.

The importance of providing the participants advance notice of the systems goals stated earlier. Even when directors believe they have supplied clearly stated unambiguous pre-conference descriptions of goals and roles, participants often arrive with expectations varying considerably from those of the staff and other participants.

Part of the system building phase involves participants clarifying the intent of the temporary systems goals and making the "official" systems goals their own, even though the goal statements developed by the staff may have been based on information collected from participants in advance, the system goals may still require modification to fit the particular group of participants. Some activities which can aid in the goal redefining process are group discussions, problem census talking, individual contracts and group review of a summary of pre-conference data. (Goffman 1961, pp. 37-40; Schein et. al. 1961, Case B).

3. Role Redefinition:* The act of stating and clarifying the relationships between members of the temporary system and the part or character each person assumes he has to play.

The problem presented to the staff is to teach people two new sets of roles, those specific to the temporary system (e.g. shift from teacher to learner, team member risk taker and/or experimenter)

*Examples given in Section III.

and those which are to be enacted upon return to the permanent system (e.g. disseminator, resource person, implementer, inquiring teacher, consultant, learning manager, demonstration teacher etc.).

The staff of a temporary system expect the participants to do certain things. The participants may arrive at the temporary system expecting to do other things. An example of role redefinition would be the college teacher who arrives at a conference and learns that he is expected to do micro-teaching of elementary school children. College teachers do not normally expect to teach school children, particularly in front of their own peers. In the permanent system the college teacher might refuse to engage in this kind of activity on the basis of it being out of role and it would make him uncomfortable. In the temporary system, however, risk taking can be the norm and new role behaviors can be tried out.

In the temporary system the staff seeks to establish a norm, trying new behaviors or experimenting with activities normally not included in the "back home" definition of the role. The reasons for trying new roles should be stated and participants should be given support while trying new roles (Kelman 1961).

4. Norm Formation:* <u>The act of stating the desired social climate in the temporary system and carrying out activities which help achieve this social climate.</u>

A norm is a shared set of ideas and feelings about appropriate behavior, which is common to a group whose members have some social interaction together. The newly forming temporary system has no existing norms except those generally held in the culture surrounding the temporary system.

*Examples given in Section III.

No one person or group can mandate norms, they can only develop as social interaction between the members of the group takes place. However, since no real norms exist in the temporary system, the staff can help influence the development of norms which will enhance achievement of the systems goals.

One way to build a set of desired norms is for the staff and participants to jointly list those norms which they would like to develop. Activities should then be operated in a fashion which supports development and maintenance of these desired norms. As a result of establishing desired norms productivity is raised (e.g. Kelly and Ware 1947; French 1950; Lawrence and Smith 1955), attitudes change (Lawlor 1955; Mitnick and McGinnies 1958), group skills improve (Lippitt 1948; Bradford and French 1948; Hare 1953).

5. Governance System Building: <u>The process of clearly establishing how decision for the temporary system will be made and how the participants can influence these decisions.</u>

Experience with a variety of temporary systems indicates that vigorous work only appears after the participants have asserted their authority in some way. As Miles states, "Even where authority shifts are not dramatic, there often seems to be a kind of 'tipping point' in many conferences where roles have been defined to everyone's satisfaction rather than being accepted passively. If the balance of power which emerges stresses participant autonomy and egalitarianism, high productivity is very typical." (Miles 1964 p. 470).

In the permanent system there is a clear cut mechanism for making decisions. Each person knows where he stands in the power hierarchy. The routes for influence are constrained and well

prescribed in contrast when people arrive to participate in a temporary system they are unsure about how much weight their wishes will carry. They may wonder about who can exert influence over the fate of this new system.

Productive work can begin sooner if concerns about governance of the temporary system are settled early. Because of the importance of meeting the participant's needs, the tendency for a norm of egalitarianism, and the relatively small size of most temporary educational systems, it may be wise for the staff to consider a representative kind of governance structure.

Initial decisions about the system building phase of the temporary system will usually by necessity be made by the director and staff. However, as the system becomes established, a shift in the decision making process to a council of staff and participants, a steering committee, or a town meeting may be considered.

The director and staff should plan for the development of a flexible governance arrangement which helps participants to share responsibilities for the operation of the temporary system so that the conditions described above come into existance.

6. Resource Identification and Use: <u>The process of making participants and staff clear about what human and physical resources are available in the temporary system and of how they can be used.</u>

In his own permanent system each participant knows who and what is available to help him achieve his goals. However, people who could help are frequently not asked, because a norm of exchange does not exist. Thus this aspect of system building includes two tasks,

that of making public information about resources and developing a norm of active exchange and resource utilization.

A list of resources can be very valuable to the participants. Such a list should include availability of typewriters, duplicating machines, science materials, books, audio and video equipment, secretarial help, etc.

The human resources are the most valuable asset of the temporary system. An inventory of participants' special interests and experiences which minimizes "back home" role and status differences can increase utilization of human resources.

7. Monitoring and Feedback Mechanisms:* Methods for periodically collecting information from participants concerning their attitudes, feelings and the state of their knowledge, and the use of this information to make inferences about the state of the system and to modify the program.

Better decisions can be made if there are some data available. In order to assess the state of a temporary system, the participants and staff should share their perceptions of the situation so that decisions can be made about how the temporary system should proceed. Data can be collected on specially designed feedback forms, informally by individual discussions, in a town meeting or problem census meeting or by other methods.

Regardless of how data are collected, it is important that the data from the entire group be collated, summarized and presented back (fed back) to the participants in a discussion which emphasizes

*Examples given in Section III.

how this data were or should be used to modify the scheduled temporary system activities. In a system which may only run for one or a few weeks, daily feedback collection, summary and discussion is important in getting the system started and assuring efficient use of the available time.

When participants are aware that their feedback is having an affect on program modification, they will have a greater sense of control over their own fate. With this increased sense of influence goes an increase in effort and more productive work. By feeding back the results of data collected, individual members can maintain some perspective on the perceptions of others.

C. Operating a Temporary System

When the feedback data indicates that participants have established a match between the system's goals and their own; are clear about their roles and the norms in the temporary system; are able to identify the human and physical resources present; and know how to make inputs into the governance of the temporary system, the system building phase is complete.

The heart of any temporary system lies in the operation of the activities which are designed to aid the participants in achieving the system's goals.

1. Micro Designs:* The process of implementing individual activities, sessions, procedures etc. designed to aid the participants in achieving the temporary system goals.

The bulk of the temporary system program usually consists of a series of micro designs inserted into the macro design. The actual

* Examples given in Section III.

activities may have a variety of formats e.g. lectures, discussions, laboratory work, reading, individualized modules, role playing, micro teaching field trips etc. Each micro design has a clearly stated set of objectives which are related to the overall goals of the temporary system. It is possible to plan micro designs in such a way that they further both the system goals and development of desired norms.

The basic format, structure and process of a temporary system such as a workshop, provides the raw material for the learner's direct experience. If the system is oriented around knowledge transmission, then traditional "teaching" modes will continue, no matter how elegant the materials and "methods" advocated. In short, to a considerable degree, the medium is the message. How the workshop is conceived, managed and experienced probably does more to change the learner than the particular content being worked on.

2. Work Group Formation and Use: The process of grouping individuals to carry out activities together.

One of the values of a temporary system can be the chance to work with a range of people with varying backgrounds. Teachers can meet and work with other teachers, administrators, college professors, and/or students. Each person can meet others having similar and different problems and new solutions for problems can be developed.

The staff of the temporary system can help make participants' resources visible by planning micro designs which give the participants membership in many different small groups. This also has the effect

of increasing the variety of ideas each participant will encounter particularly when some groups have a maximum of role types and backgrounds. By changing group membership role, flexibility is maintained.

3. Conflict Management: Procedures to identify and resolve problems and to improve the socio-emotional climate of the temporary system.

When groups of people work together, conflicts and problems often emerge. In the permanent system a regular procedure for resolution of problems may exist. Often these are simply suppressed and eventually lead to system malfunction. In the temporary system, particularly because time is short, the staff should provide a mechanism to identify conflicts quickly and to help in resolving them. Suppression of conflicts can lead to task deterioration. The use of monitoring and feedback methods previously mentioned can be of help in identifying conflicts and problems.

4. Governance-Decision Making: The methods used by the temporary system members in reaching decisions concerning the operation of the temporary system.

A mechanism for governance should have been developed during the system building phase of the temporary system. That mechanism must now be used to make the decisions effecting the temporary system. Procedures need to be established for participant input into the decision making group and for rapid communication of decisions to the participants.

5. Recreation: The process of providing time and facilities for the participants of the temporary system to utilize for relaxation.

Participation in the temporary system can be an intensive and sometimes exhausting experience. Members of the group usually will need some time to individually reflect on the experience and some time for group relaxation. The staff of the temporary system should provide the time and some facilities, such as volley ball, frisbee, swimming, social hours, picnics etc. The establishment of a social committee consisting of participants may be useful in this connection.

D. Closing a Temporary System

Directors of temporary systems often remark, "The conference always seems to disintegrate a day or two before the last day." As the temporary system approaches a conclusion, participants begin to consider their return to the permanent system. Travel arrangements, connections, gifts for family members, work that must be picked up, must all be considered as the participant contemplates his return to his ongoing duties. In short, participants may begin a psychological withdrawal from the temporary system as return to the permanent system becomes imminent.

Since the potential problem is consideration of return to the permanent system, one can make a virtue of necessity. During the final days the focus of the temporary system can shift to consideration of how new learnings may be implemented in the permanent system.

Many outputs of temporary systems involve the production of plans and agreements for specific actions (e.g. teachers implement

a curriculum, groups conduct orientation sessions etc.). In the close down phase of the temporary system, detailed work on these plans is important. It is more likely that learnings will be transferred to the permanent system context if extensive plans are made before the responsibilities of the permanent system resume.

1. Forward Action Planning: <u>The process of planning anticipated activities in the permanent system.</u>

One of the main goals of a temporary system is often to bring about changes in permanent educational institutions. The final few days of the temporary system experience can be used to reflect upon what has been learned, to pick out implications of this learning for the permanent system; what changes may be possible in the permanent system, and to decide upon a sequence of actions to be carried out.

Members of the temporary system must consider how to make a smooth linkage with the permanent system. The temporary system may have been created because of difficulty in making changes in the permanent system. Participants must be aware that the role conflicts, work pressures and vested interests of the permanent system have not disappeared while they were away.

> "Generally speaking, the success of action decisions made in the temporary system will depend not only on the quality of these decisions as such, but on the sophistication with which members have been able to anticipate (and to plan for coping with) the strategic problems they will encounter upon their return. Thus, a good deal of energy should be invested during the closing days or hours of the system in planning strategy - and in inventing institutionalized ways to support the work so nobly begun in the time-limited setting." (Miles 1964 pp.483, 484)

2. Forward Support Planning: The process of making decisions about what actions the staff can take to aid the participants after they have returned to their permanent systems.

Once the participants have returned to their permanent system duties they may need help in implementing the actions they proposed in the permanent system. Continued contact with the temporary system staff can sometimes make the difference between early success and failure.

The staff should consider the possibility of follow-up meetings, newsletters, telephone calls, on site visits and other ideas which can aid the participants and renew lagging commitment. Often an intervention by someone outside of a particular permanent system can be critical in supplying impetus for change. Therefore, the participants need to develop some mechanism for calling upon each other and/or the staff for assistance. The closing meetings normally are focused on developing mutual support mechanisms.

3. Forward Network Planning: The process of designing means by which participants gain easy access to the resources of the group after the termination of the temporary system.

A network can be defined as a group of physically dispersed individuals who have readily available access to and trust in each other's competence.

The temporary system participants have usually developed significant rapport by the close of the temporary system. They are aware of the unique abilities of various members of the group. A

common point of view and language has often resulted from the experience that all participants have shared.

The temporary system participants can act as a reference group whose members value ideas not valued in some permanent systems provided they stay in communication.

During the closing stages of the temporary system, the members need to consider ways in which they can easily call upon each other for help. The following methods have been used by various groups: audio tape exchange, chain letters, conference calls etc.

4. Evaluation and Evaluation Planning:* <u>The act of assessing the immediate effects of the temporary system experience and of developing methods for assessing longer range effects of the temporary system.</u>

The closing days of the temporary system is also a time for participants and staff to take stock of outcomes of the temporary system. Post measures to assess cognitive development, skill development, attitude changes etc. may be administered.

Anticipated outcomes in the permanent system may also be discussed and plans made for when and how these outcomes will be detected and where relevant, measured. Commitments of various participants to provide certain kinds of data should be made before the close of the temporary system. The plan usually specified the period during which the data will be collected, the means of collecting it, and from whom it will be collected.

E. <u>Following-up A Temporary System</u>

If the primary focus of a temporary educational system is to support changes in permanent educational systems, the staff needs

to realize that their responsibilities may not end with the completion of the temporary system. These responsibilities include implementation of the forward support and evaluation plans made in the closing stages of the temporary system.

1. Follow-up Support: The act of implementing plans for aiding the participants after their return to their permanent systems.

The temporary system staff should continue their communication with the participants by means of the methods developed in the support planning phase. Every effort should be made to promote development of the participant network and provide a reference group to support the participants in taking actions in the permanent system.

2. Follow-up Evaluation: The act of collecting data about effects on the participants and their permanent systems which can be attributed to the temporary system experience. The act of collecting recommendations for future programs from participants and staff members.

The ultimate value of the temporary system can be measured in terms of effects on participants and their permanent systems. The temporary system managers should collect data to assess the value of the temporary system and to provide recommendations for future temporary systems. Sometimes the very act of collecting information from participants stimulates them to renewed activity.

III. EXAMPLES ILLUSTRATING SOME TEMPORARY SYSTEM CONCEPTS

All of the examples cited below are from actual National Science Foundation supported programs. The examples given are

not meant to indicate what should be done. They are provided only where examples may add clarity to the understanding of a particular concept.

A. Planning Concepts

Concept A-1 Goal Setting

Samples of Initial Goals

1. From a recent Cooperative College School Science (CCSS) Project;

PROPOSED OBJECTIVES FOR THE SUMMER AND ACADEMIC YEAR PROGRAM CCSS PROGRAM

For the School System

A. To implement the adoption of the Intermediate Science Curriculum Study (ISCS) in grades 7-9.

B. To complete the implementation of Science - A Process Approach (AAAS) in grades K-6 and extend this program to include other materials.

C. To increase the level of integration of the science and mathematics curricula in the junior and senior high school and the science and other curriculum areas in the elementary school.

For teachers from the School System

After completing this CCSS project participants should be able to:

A. Demonstrate a knowledge of the philosophy, content and teaching methods of the Intermediate Science Curriculum Study (ISCS) and Science - A Process Approach (AAAS).

B. Identify and name content areas and activities from the science program which can be used as a basis for introducing or using mathematics concepts or for carry-over to other subjects.

C. Demonstrate ability to individualize instruction for children in a subject area which they teach.

D. Demonstrate ability to operate an "open" classroom in which different children may be occupied in a variety of different activities.

E. Develop and demonstrate qualities and/or attitudes of "realness," "prizing," "acceptance," "trust," and "empathic understanding" (as defined by C. Rogers Freedom to Learn, Merrill, (1969), pages 106-112) in the operation of their classrooms.

2. From a Resource Personnel Workshop

The proposed leadership workshop will endeavor to produce resource leaders who are able to:

Demonstrate a knowledge of the rationale, strategies, methods and materials of The Science Curriculum Improvement Study (SCIS);

Identify the commonalities of other new elementary science programs with SCIS;

Construct an analysis of their own teaching of SCIS to children on viewing a video-taped lesson they have presented;

Identify and use intergroup relations skills which will bring about change in in-service and pre-service teachers, school administrators, community persons and their own colleagues;

Construct plans for conducting SCIS awareness conferences, mini-workshops or semester-long in-service training workshops;

Present SCIS awareness conference and/or mini-workshops in the metropolitan Philadelphia area in preparation for other presentations in their own communities;

Concept A-2 Recruitment/Selection

Below are samples of recruitment procedures from program brochures for applicants to various NSF programs.

1. From a Resource Personnel Workshop:

REQUIREMENTS

The participants will be drawn from urban and suburban community leaders, science educators, school administrators or key-classroom teachers concerned with elementary school science. The participants will be formed into teams of

three persons each. Ideally the three team members will reside in the same area. The project requires that each team submit a tentative plan for implementation activities in their respective community. The selection of participants will be based on these criteria:

The applicant works in or provides service to an urban or suburban community.

The applicants must be:

State College professors teaching elementary school science education courses;

State Department of Education science coordinators or consultants;

Directors of science education for a school district;

Science Supervisors of elementary school science;

Principals of an elementary school

Elementary school classroom teachers who are considered key personnel;

Community leaders with at least two years' experience and affiliation with a community based organization, e.g., President of an urban coalition league; President of a Parent Teachers Assoc.; a school board member; a leader in a union organization; a leader in any of the community organizations listed by the Office of Economic Opportunity, or a recognized leader in community affairs. One member of each team must be a Community Leader with the remaining two members of each team being selected from among a through f.

The applicant must include with his application a statement from his community organization, college or school system indicating what use will be made of the leader's expertise.

The school system of an applicant must agree to support the training of teachers in the use of SCIS materials. The district must further support implementation activities by purchasing necessary materials and providing time for teachers to receive training. The extent of possible implementation activities will be a prime consideration.

2. From a CCSS Project:

SELECTION OF PARTICIPANTS:

The only criterion for selection is that a teacher be a member of the teaching staff of the participating School System. If more teachers than can be accommodated volunteer for the project, selection will be based on school and grade distribution among the five participating elementary school buildings and recommendations of principals. Teachers who agree to be part of the project must commit themselves to: 1. attend all sessions; 2. to teach the Science - A Process Approach curriculum for the 1968-69 school year; 3. to give competency measures to children after each exercise; 4. to report scores of competency measures to the project director.

Concept A-3 Norm Specification

This example is taken from the notes of a staff planning meeting. The staff listed the following norms as desirable:

Norms:

1. Humor
2. Reflexiveness (thinking over what happened)
3. Initiative
4. Diligence
5. Experimentation
6. Informality
7. Cohesiveness
8. Sharing, collaboration
9. Promptness

Concept A-4 Data Planning

Three examples under concepts B-7 and D-4.

Concept A-5 Time and Territory Choice

No example provided.

Concept A-6 Resource Location and Allocation

No example provided.

Concept A-7 Macro Designing

Below is a sample macro design from a three week Resource Personnel Workshop (RPW) on Science - A Process Approach for forty participants. (College teachers and school science coordinators).

Day	General Activities
Before system start	Collect pre-conference data.
1 and 2	Start-up. Getting to know each other and Science - A Process Approach. Working with the program materials. Discussion of conference goals, participant goals and macro design.
3 - 7	Skill development of processes in Science - A Process Approach and how to teach them to children and teachers. Activity sessions taught by staff. Micro teaching taught by participants to local school children. Discussion of teaching techniques for children and teachers. Planning for teaching, a workshop to teachers.
8 - 12	Skill practice. Participant teams teach workshop on Science - A Process Approach to local teachers. Staff to assist and critique.
13 - 15	Review of workshops and planning for similar programs to be carried out back in the permanent systems. Some planning for follow-up and post data collection.
After system ends for a two year period	Monthly or semi-monthly newsletters from director to all staff participants. Newsletters include ideas and suggestions submitted by participants and reviews of what participants are doing. Data on forms sent by director collected from participants. Annual meeting of participants in conjunction with Annual National Science Teachers Association meeting.

Concept A-8 Analysis of Constraints

Examples of assumed constraints would be:

"We can only meet Monday through Friday from 8 a.m. to 4 p.m.; those are the hours the building is open."

"My proposal to NSF said exactly what I was going to do each day. I can't change it now."

"Dr. X expects to lecture from 9 to 10 each day so we can't get the kind of discussion going that we should have."

In each instance the assumed constraint may very well prove unreal, arrangements might be made to keep the building open longer hours or to meet in another building; a telephone call to the responsible NSF Program Director may result in approval for a proposal change.

Other constraints may indeed be real and unavoidable. A fixed budget may restrict the purchase of certain materials. The food service may supply meals only at fixed times and be unable to accommodate to daily schedule changes.

If Dr. X were involved in the planning he might consider other times and methods of instruction.

Concept A-9 Pre-System Communication

The sample provided is from a CCSS program letter to participants.

.....We are looking forward to the three week workshop which begins..... . Your application forms show that the group..... .

In order that we can plan a program to meet individual needs we are enclosing a questionnaire which should be returned..... .

Also enclosed are a list of objectives for the workshop as they are presently seen by the staff. The objectives and the program plan will be modified to meet your needs as expressed on the questionnaire and throughout the workshop.

The first workshop meeting will be..... .

All participants will receive a stipend of..... .

All meetings of the summer workshop will be held at..... .

Participants will also earn three (3) credits in..... .

Please bring to the workshop..... .

If you have any questions prior to the workshop you may call..... .

B. Building Concepts

Concept B-1 Acquaintanceship

The micro designs described below are from two CCSS programs, each of which involved participants from several different school systems.

Objectives:

1. To give people a basis for talking together
2. To begin the process of making group resources visible

In the first case each participant was given a copy of a Polaroid picture of himself taken when he arrived on the first day, and a sheet like the one below. Each person was then told to find one person they did not know and as a pair each was to interview the other person and fill out his sheet. Each pair then met with two other pairs and each person introduced his partner to the group using the sheet they prepared as a reference. All sheets were then posted and comments were added throughout the conference.

Biography Sheet

(actual size 8½" x 11")

_____
Name

Your picture goes here.

_____
School

What you want to be called goes under your picture.

About you and ISCS ⟶

About you professionally ⟶

About you non-professionally ⟶

Time Started_____

Time Completed_____

A prize will be awarded to the winner.

In the second case each person got the following sheet to complete:

Objectives: 1. To establish certain norms

2. To identify group resources

Rules: Get a signature next to each item. A person may only sign your paper once.

1. Participant in the Wayne Consortium_____
2. Allows students to take terminals home_____
3. Has one on-line and one off-line terminals_____
4. Is head of a math department_____
5. Is starting an ACM club_____
6. Was a beginner with BASIC last week_____
7. Is very good at programming in BASIC_____
8. Will be teaching the Colorado program this year_____
9. Gets here before 8:00 most mornings_____
10. Has already ordered the necessary Colorado ALG II books

    _____

11. Is from a school planning a comparison evaluation of computer algebra (Colorado materials) and traditional treatment of Algebra II.

    _____

12. Has a lot of experience scheduling students for terminals

    _____

13. Wants help in making terminals serve more students

    _____

14. Has helped some science teacher(s) to use the computer

    _____

15. Has a plan for interesting parents in the district in supporting the cost of terminals

    _____

16. Runs a computer club_____

Your name_____

TIME STARTED_____

TIME COMPLETED_____

A prize will be awarded to the winner.

Concept B-2 Goal Statement and Redefinition

The micro design described below was typical of those used in many NSF projects.

The staff re-listed the conference goals previously sent to participants and also supplied a summary of the data collected prior to the system start. The pre-system data collected included participants' answers to these three questions:

1. For you, what would have to happen at the conference to produce the best possible outcomes?
2. For you, what would be the most disappointing thing that could happen at the conference?
3. List those topics or problems you would particularly like to have time to work on during the conference.

After some group discussion of the original goals and the pre-conference data summary, a modified set of goals was developed by the group as a whole.

Concept B-3 Role Redefinition

The description below was taken from the final report of a Resource Personnel Workshop. The roles which each participant played are underlined to emphasize the variety. Participants were advised of these roles in the pre-conference communication and the reasons for them were discussed in various sessions during the start up period.

Most of the first week of each conference was spent in sessions where the staff taught the process skill activity sessions to the participants using the basic lesson plan outlined in the "Inservice Guide." This gave the participants a basic working knowledge of

the skills they were going to teach. These sessions also familiarized the participants with the "Inservice Guide Sessions" and the method of teaching them. Often the participants were placed in the same learning situation as the teachers they would be teaching in their own school settings.

After each of the process skill sessions the participants reviewed the session as outlined in the "Inservice Guide" they each received. This review often focused on teaching methods, likely problems and potential solutions to problems.

Part of the first and second weeks of the conference were used for the participants to prepare to teach, and to observe each other teach to children. These lessons were in a micro teaching situation with one participant teaching four or five children while being observed by a few other participants.

It was interesting that some of the participants who were going to teach teachers how to teach children had never taught elementary children themselves.

By teaching the exercise from Science - A Process Approach, the participants became familiar with some of the materials, content, process skills, and methods in the science exercises for children. They also became aware of problems facing the teacher who tries to teach these new materials to children.

By receiving feedback on their own teaching, and by observing others and giving feedback the participants improved their teaching skills and learned new methods of helping teachers without antagonizing them.

Part of the second and third weeks of each summer conference were used to have the participants prepare to teach, to teach, and to observe their colleagues teach a workshop for teachers. Each summer the participants were divided into teams of about eight people. Each of these teams had the responsibility to plan and carry out a workshop for either teachers or parents.

Participants found this chance to develop and refine their skills in giving a workshop very valuable. The group planning and feedback between group members and between group members and staff was also very useful.

Concept B-4 Norm Formation

Example 1 from a CCSS program.

A micro session was designed to achieve the following objectives:

1. Foster the development of a specific set of norms:
    a. Openness to different points of view
    b. Collaboration
    c. Humor
    d. Tentativeness
2. Build the group as a community of learners
3. Examine the process of constructing mental models

Procedure: participants were formed into groups of four and presented with a sealed box. The task was to infer the possible organization of objects in the box from evidence obtained by doing things to the box. Each group produces a model. The models are posted, discussed and revised.

Example 2 from a Resource Personnel Workshop

On the first conference day the staff posted a list which said in large print:

Be Informal

Innovate

Help Make Group Decisions

COLLABORATE

Take Creative Risks

"Pick" Brains

Give and Use Feedback

Reflect and Analyze

To encourage norms of egalitarianism, openness and a sense of participant control over the conference, each item on the list was discussed and it was made clear that the objectives, contract, and schedule were only tentatively proposed, that the conference was to meet participant needs and all of the above could be modified at participants' request.

Concept B-5 Governance System Building

See example under Concept C-4.

Concept B-6 Resourse Identification and Use

See examples under B-1.

Concept B-7 Monitoring and Feedback Mechanisms

Below are examples of feedback items from several different NSF projects. Each item is identified with the particular objectives for its use.

a. Monitoring for goal attainment

What changes in the way the program has operated so far would help you achieve your objectives more easily?_____

_____

_____

_____

b. Monitoring for group functioning

Have you made any new acquaintances? Is the group helpful? Do you feel comfortable?_____

_____

_____

_____

c. Monitoring for micro design operations

Example 1

Activity Name_____

	High	Low
Interest	_____	
Pacing	_____	
Knowledge	_____	

Need more information about:

Comments:

Example 2

Activity:_____ Date:_____

REACTION FORM

Rate the value, all things considered, of this activity for you. Place a circle around the number selected.

1. Absolutely of no value, learned nothing at all
2. Almost completely of no value
3. Passable
4. Of some value, but less than average
5. About average
6. Somewhat valuable, better than average
7. Quite valuable
8. Very valuable, learning almost at maximum
9. Extremely valuable, learning at maximum

Comments, criticisms, questions:_____

_____

_____

_____

_____

_____

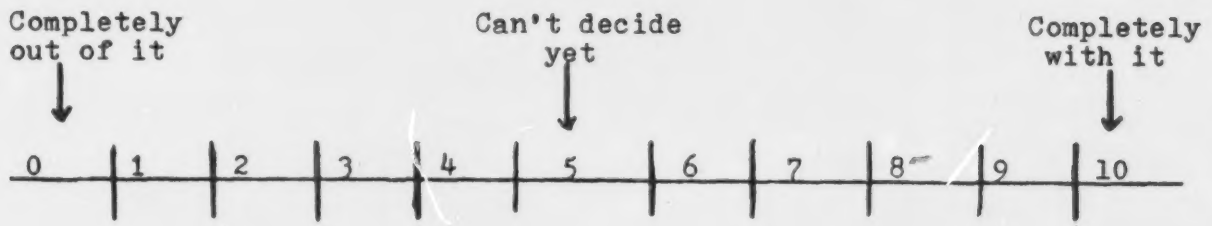
_____

Below write two adjectives which describe your feelings right now.

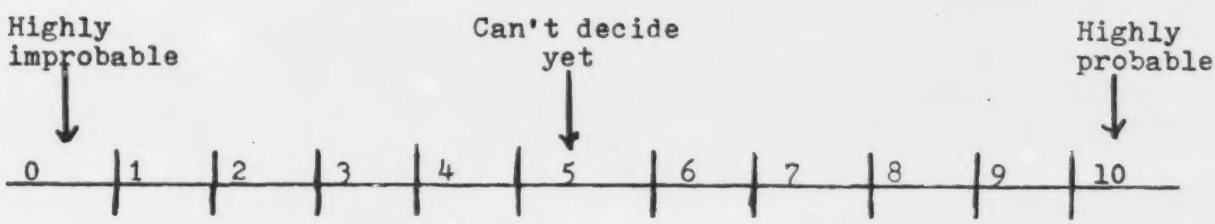
d. Monitoring of norm development and feelings

POST MEETING REACTION SHEET

How Included Do I Feel?



How probable is it that my own learning goals will be met?



List two adjectives that describe your feelings right now.

Comments:

C. Operating Concepts

Concept C-1 Micro Designs

Below is a sample micro design for skill development taken from a leadership workshop.

MICROTEACHING

Purpose: Practice a specific teaching behavior for a narrowly defined teaching objective.

Examples of Teaching Behaviors:
1. Using praise
2. Trying a management technique
   Example: Moving children from one place to another
   Distributing materials so the lesson is facilitated
3. Asking discussion questions

Procedure:
1. One teacher teaches 5 or 6 children for 10 - 15 minutes.
2. Other teachers observe, using observation guidelines
3. The children give feedback based on feedback guidelines
4. The observers give feedback
5. The teacher re-teaches modifying the same behavior in response to the feedback*
6. Children and observers give feedback again

*Since the subjects being used are real people, there should be something in all this for them. It is suggested, therefore, that new content be used for re-teaching.

MICROTEACHING FEEDBACK GUIDELINES

For Children: What did you like about the lesson?
What did you dislike about the lesson?
What did you learn?
Did you feel the teacher was interested in you?
Would you like to have this teacher teach another lesson?

For Observers: Was the objective met?
Was the teaching behavior consistent with the objective?
Was the teaching behavior consistently maintained?

Concept C-2 Work Group Formation

The example described under Concept B-3 shows the variety of work groups participants were involved in. Each of these groups was composed of different individuals.

Concept C-3 Conflict Management

The feedback and monitoring examples shown under Concept B-7 are often useful in identifying conflicts.

Concept C-4 Governance Decision Making

The final report of a CCSS project for forty-five Junior High School Teachers includes this description of the governance procedure.

Each day ended with a general session which usually lasted from fifteen to thirty minutes. During this session the entire group met to collect written feedback, to review the day's activities and to make suggestions for future activities.

This general session was followed by a staff meeting which was open for participant attendance and input. The staff made tentative decisions based on the general session and participant written feedback. Each day began with a short general session in which the previous day's feedback was summarized and tentative staff decisions based on this feedback were reported to the group. These decisions were discussed, sometimes modified and then implemented.

Concept C-5 - No examples provided.

D. Closing Concepts

Concept D-1 Forward Action Planning

Example 1 is a summary of "back home" needs and potential resources generated in the closing stages of a CCSS computer project. It became the basis for "back home" planning (see next page for example).

Example 1

IMPLEMENTATION PROBLEMS OF SCHOOL DISTRICTS

NEEDS	RESOURCES
RIDGEWOOD	
1. Lack of trained personnel in a position of leadership for 1972-73	1. Terminals available at Jr. & Sr. High Schools.
2. More teachers involved in curriculum	2. Textbook account available.
3. Curriculum changes	3. In-service courses have been offered and are given when needed or requested.
4. More time available to students	4. Many trained teachers in Elem., Jr. H.S., and Sr. H.S.
5. Space	
MIDLAND PARK	
1. More terminals (have 1)	1. One terminal
2. A control group for comparison	2. Textbooks for one complete class
3. More time for teacher preparation	3. Good administrative cooperation
4. Means of keeping time available on the terminal for interested students not in Alg. II	4. Some students are already familiar with BASIC, could act as assistants
	5. Ample room for more terminals
	6. Room available within close supervisory distance from classroom
CEDAR GROVE	
1. More than 1 terminal	1. One terminal
2. Lack of space	2. Better than having students course
3. More time in off hours	3. Good textbook for novices
4. Only 1 of 6 teachers knows BASIC	
5. Larger library	
6. Faster teletype	
RAMAPO	
1. Reference Texts	1. Two terminals(1 on, 1 off-line)
2. Relocation of terminals	2. 6 of 13 teachers know BASIC
3. Administrative involvement	
INDIAN HILLS	
1. Additional terminals for math	1. Good student & faculty ref. library
2. Released time for teachers to a) supervise student participation; b) apply computer techniques to other areas, e.g. sociology, biology	2. Student math-science workroom
	3. Large computer room in math wing
	4. One on & one off-line terminal
	5. One Monroe programmable calculator with card reader for small programs
	6. Video-tape equipment
	7. 5 of 11 know some BASIC
	8. Excellent cooperation of dept. chairman and principal
VERONA	
1. Textbooks	1. 2 of 5 teachers know BASIC
2. Sufficient terminals; 1 on, 1 off-line, presently offering computer math course	2. Curriculum coordinator cooperative
3. Wrong teacher course assignments	
4. Limited space	
5. Classes too large	

Example 2 is a micro design from the close down stage of a leadership workshop on social studies curricula.

SUGGESTED FORMAT FOR BACK-HOME TEAM PLANS

PART I - Rationale and Background

A. A brief statement of who you are and what your're about.

PART II - Stated desired outcomes

A. Activities, events, etc. that will help reach that outcome.

B.

C.

D.

E.

PART III - A chart of outcomes, events or activities, target group, date RPW staff responsibility

PART IV - Mailing address for each team member

Example:

I. Rationale:

II. Desired outcome

(1) To gain acceptance and support for the NSF team from all administrators in our system.

a. The team will meet with the high school principals' council and discuss the ensuing year's plan.

b. The team will prepare and put on a demonstration workshop at the Administrators' Conference that will model both examples of the process materials and the curriculum project materials--I.G. The Kalihari Bushmen From ASCP and the Johari Window exercise

III. Calendar

Desired outcomes and Activities	Target Group	Date	RPW Staff Responsibility
To gain acceptance and support from administrators			
(A) High School Principals Council	High School Administrators	Sept. 1, 1972	Coordinator
(B) Workshop at Administrators' Conference	Administrators K-12 plus District Administrators	Sept. 15, 1972	All Staff - Presentation assignment to be determined. Maynard Gene Frickert to contact District Superintendent and make necessary agenda arrangements.

Concept D-2 Forward Support Planning

See example under Concept E-1.

Concept D-3 Forward Network Planning

This example is from an article describing a Resource Personnel Workshop.

> "Continuing contact among teams was deemed valuable for maintenance of a support system as well as for the continued learning of participants. This inter-team contact was encouraged by means of informal communication between team members and by newsletters. Team exchanges and the visit of one team to another were even more important in this process. These exchanges took the form of the visiting team's serving the function of "outside consultants" to the colleagues of the resident team or of two teams in sponsorship of a drive-in invitational workshop. Regardless of the primary objectives of the visit, there was always an actual exchange of practices and experience with the result that each team benefitted by clarifying its objectives and renewing the strength of its commitment." (Girault and Gross, 1973).

Concept D-4 Evaluation and Evaluation Planning

Example 1 - the next two pages were used for assessment at the conclusion of a three week summer workshop portion of a CCSS project.

Example 2 was used at the end of the academic year to collect data on workshop effects in the school system.

Section D-4 Example 1

Name_____ Date_____

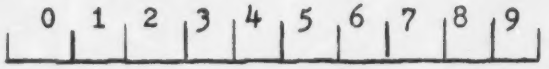
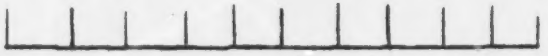
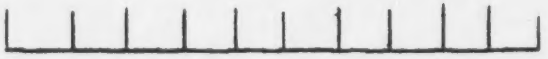
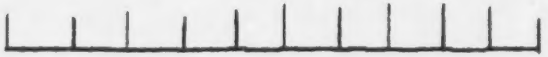
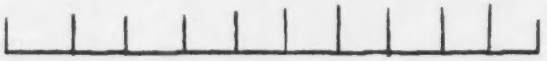
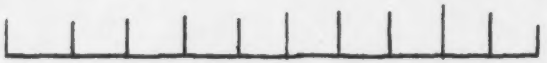
NSF Program_____

Home Address_____

_____

We expect that you may be having a variety of experiences in this NSF workshop and, of course, these experiences affect what you will learn (or already have learned) in it. These experiences and consequent learnings depend on how well the director and staff of the workshop have done certain management and administrative tasks in conducting the workshop.

Please read through the items below. For each one, put an X on the line showing how well you think the various management tasks have been done by the director and his staff.

1.	The workshop goals were not specified very clearly.		The workshop goals were specified very clearly.
2.	The climate or atmosphere of this workshop is poor.		The climate of this workshop is very good.
3.	The "wrong" people came to this workshop.		The "right" people came to this workshop.
4.	The overall design of this workshop is ineffective.		The overall design of this workshop is quite effective.
5.	This workshop did not get off to a good start		This workshop got off to a good start.
6.	During this workshop, the staff does not seem to know what is going on.		The staff of this workshop seems to be in very good contact with what is going on.
7.	As a participant in this workshop, I feel I have little influence or say about what happens.		As a participant I feel that I share actively in influencing what goes on.

Section D-4 Example 1 continued

Please continue putting an X to show how well you think certain management tasks have been done by the director and staff of the workshop.

		0 1 2 3 4 5 6 7 8 9	
8.	The program will have no influence on what I do next year		The program will strongly influence what I do next year.
9.	Staff resources are being poorly used in this workshop		Staff resources are being well used in this workshop.
10.	Differences of opinion have not been handled well during this workshop.		In this workshop differences of opinion have been handled quite well.
11.	There have been no "experiential" or discovery-type learning procedures used in this workshop.		"Experiential" or discovery-type procedures have frequently been used in this workshop.
12.	Procedures used during specific sessions of this workshop seem ineffective.		The procedures used in sessions are very effective.

General Comments:

D-4 Example 2

All NSF-CCSS-ISCS Participants please fill out and return this form (in the envelope provided) (Remember your commitment)

Your Name_____

Your School System_____

Your School_____

List below the number of ISCS classes you taught during the 1972-73 academic year by grade level (6, 7, 8, 9, 10) and ISCS level (I, II or III).

Number of classes of Level I _____ (Grade Level _____)

Number of classes of Level II_____ (Grade Level _____)

Number of classes of Level III_____ (Grade Level_____)

List the approximate average number of students per class._____
Briefly describe your testing and evaluation method and the approximate percentage of children you expect to get each grade. (A, B. C, D, F, Pass, Fail, etc.) by ISCS Level (I, II, III)

For each ISCS Level (I, II, III) list the fewest, most and average number of chapters or units you expect your students to complete.

Chapters Level I most_____, average _____, fewest_____

Chapters Level II most_____, average _____, fewest_____

Units Level III most_____, average _____, fewest_____

D-4 Example 2 continued

What plans are presently proposed for utilization of the ISCS program in your school during the next few years?

About how many visitors from other school systems visited your school to observe the ISCS program this year?

Describe in your own words if participation in the CCSS workshop aided you to teach more effectively this year and if so how?

Please designate one person from each school to collect three copies of each of the teacher prepared materials (evaluation sheets, objectives, tests, etc.) prepared this year and mail them to..... .

E. Following up Concepts

Concept E-1 Follow-up Support

The description below is from a final report of a Resource Personnel Workshop.

Follow-up during the academic year

The workshop director corresponded with the participants by means of a newsletter which was sent to all participants about every two months. Participants often telephoned and wrote to the director about what they were doing and problems they encountered. Each year a follow-up meeting was held in conjunction with the National Science Teachers Association Annual Meeting. No funds were provided to enable participants to attend the follow-up meetings and yet over half of the participants attended these meetings.

Concept E-2 Follow-up Evaluation

See Example 2 under Concept D-4.

IV. A CHECKLIST OF TEMPORARY SYSTEM ACTIONS

Below are listed the temporary system concepts and some actions which can be used as indicators that a particular concept has been considered and/or utilized.

A. System Planning Action

_____Director has arranged for planning meetings with the staff well in advance of the forthcoming temporary system.

1. Goal Setting

_____Explicit statements of the goals, objectives outcomes of the temporary system exist in written form.

_____These goals are stated in terms of what participants should be able to do and what long range changes in the permanent system should be observed.

2. Recruitment/Selection

_____Criteria for participant selection are specified in writing.

_____Criteria are directly related to the goals of the temporary system.

_____Those selected fit the criteria as stated.

3. Norm Specification

_____A written list of desired norms exists.

_____Staff can describe how these norms are related to the program goals.

4. Data Planning

Lists exist of the data to be collected:

Before	During	After	
_____	_____	_____	status of cognitive and skill development.
_____	_____	_____	participants' views of their needs
_____	_____	_____	status of participants' feelings

5. Time and Territory Choice

_____meeting time has been designated and meeting sites have been considered in terms of:

_____work areas (laboratories, group meeting rooms, micro teaching, demonstration teaching etc.)

_____recreation

_____housing, meals, etc.

_____meeting site(s) has been selected and confirmed

6. Resource Location and Allocation

_____A written list exists of physical resources required to meet the system goals.

_____A written list exists of human resources (e.g. staff, consultants, children for micro teaching etc.).

7. Macro Design

Measurement

_____Written plan of the overall flow and sequence of probable activities exists.

_____Staff has participated in the design of the plan.

_____The plan is flexible and can be shifted to meet participants' needs based on data collected from them.

_____Staff can describe the relationship between specific activities and program goals.

8. Analysis of Constraints

_____Probable constraints on system operation have been listed.

_____Each constraint has been analyzed to see if it can be overcome.

9. Pre-system Communication

_____A list of what is to be transmitted to participants exists in writing.

_____These include a clear statement of the temporary system goals, and participant commitments.

B. System Building Actions

1. Acquaintanceship

_____Specific micro designs are planned and carried out in order to encourage acquaintanceship.

2. Goal Statement and Redefinition

_____An original list of proposed goals or objectives is given to the participants and discussed with them.

_____Time is allocated to review the original list of goals, after some temporary system experience; and, to modify them to meet mutual staff and participant expectations.

_____Procedures are developed for goal redefinition.

3. Role Redefinition

_____The macro design is reviewed with the participants.

_____Time is allocated to review participants' role expectations and after some temporary system experience, to modify them.

4. Norm Formation

_____Written and/or verbal statements describing the desired norms are developed jointly with the participants.

_____Staff models the desired norms by their own behavior.

_____Activities are planned and carried out to help achieve the desired norms.

5. Governance System Building

_____A method for participants to influence decisions affecting the temporary systems is developed.

_____Participants are able to state how decisions are made in the temporary system.

_____Participants feel that they can influence the flow and content of the temporary system.

6. Resource Identification and Use

_____Activities are planned and carried out to aid participants in identifying the human and physical resources in the system.

_____Participants can state what the physical resources in the temporary system are and they also can state what resources the staff and other participants can contribute towards reaching the system goals.

_____A directory of resources exists.

_____There is utilization of the resources of both the staff and the participant.

7. Monitoring and Feedback Mechanisms

_____Activities are planned and carried out to collect data about the system.

_____Information is collected in a "formal" way using paper and pencil instruments and/or discussions, frequently during the temporary system.

_____The information is summarized, interpreted and reported back to the participants along with indications of how it will affect the system.

_____The information is used to modify the program when the data indicates changes are needed.

_____A variety of techniques are utilized to assess climate and problems (feedback sheets, rap sessions, grievance or complaint committees, etc.).

C. System Operating Actions

1. Micro Designs

_____Sessions have stated goals and learning activities which meet participant needs.

_____The format of micro designs is varied.

_____Participants assume a variety of roles in different sessions (learner, team member, instructor, discussion leader, process observer, etc.).

_____Specific activities are used which give participants an opportunity to rehearse the use of the learning in simulated back home settings (micro teaching, teaching other adults, role playing, etc.).

_____Specific sessions are used for participants to plan for the use of the learnings in the back home settings and a product results from these sessions.

_____Micro designs include provisions for feedback collection.

_____Most micro sessions model the type of learning experience the participant is expected to direct in the permanent system.

2. Work Group Formation and Use

_____Individuals have membership in more than one group during the life of the temporary system.

_____At least one group has maximum variety of role types and backgrounds.

3. Conflict Management

_____Methods are used to identify problems and conflicts.

_____Procedures are established to help in resolving conflicts.

4. Governance-Decision Making

_____Decisions are based on data about system needs.

_____There are established procedures to get participant input.

_____The ways in which participant feedback effects decisions is made clear.

5. Recreation

_____Activities are planned in conjunction with participants and carried out for relaxation, fun and general social exchange.

D. System Closing Actions

1. Forward Action Planning

_____Micro designs are carried out to help participants transfer their learnings to the permanent system.

_____A written plan for each participant's anticipated actions in the permanent system is produced.

2. Forward Support Planning

_____Staff lists kind of support which it can make available.

_____Participants list help requested from staff and/or other participants.

3. Forward Network Planning

_____Plans exist for easy access between participants after they have returned to their own permanent systems.

4. Evaluation and Evaluation Planning

_____A plan is specified for assessing the outcomes of the temporary system at its conclusion.

_____A plan is developed which specified what data are to be collected to assess the effects of the temporary system on the participants and their permanent systems.

_____The plan specified the period during which the data will be collected and how the data will be collected (e.g. phone calls, questionnaires etc.) as well as from whom (e.g. participants, students, etc.).

_____The plan how the data are to be organized and analyzed.

_____The plan specified what will be done with the data once collected and organized (e.g. who gets what, where and when).

E. System Follow-up Action

1. Follow-up Support

_____The evaluation plan is implemented.

_____Records are kept of content and number of contacts between staff and participants.

_____Records are kept of the different mechanisms employed to keep participants and staff in communication with each other, (e.g. visits, newsletters, phone calls etc.).

2. Follow-up Evaluation

_____Data collected during the evaluation period are analyzed and reported to relevant groups.

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Resource Personnel Workshops: A Team Approach to Educational Change

Emily S. Girault and Richard E. Gross

Background of the Institute Movement in Social Studies

Workshops date from the 1930's but for 35 years there were relatively few changes in basic design. They were usually sponsored by local school districts, professional organizations, or by colleges and universities. Summer institutes geared for social studies teachers burgeoned in number after Congress passed the Elementary and Secondary Education Act of 1965. These had been foreshadowed following the appearance of Sputnik in 1957 and the subsequent National Defense Education Act which, however, provided few institutes especially for social studies personnel. The recent growth of such institutes has been aimed at introducing teachers to the new programs spawned by the numerous social studies projects of the last decade. While representing the emerging thought of leading academicians and educators, often based on developments going back a number of years, these projects were unable to advance significantly until they found outside support. Their finance, in goodly part, also came in this period via the national fears and reactions to growing Soviet power which for the first time brought substantial federal assistance to curriculum efforts and in-service education in our field.

The authors of this article had participated in and had also directed conventional institutes and workshops. They had reached the conclusion that long-term carry-over in terms of significant change in education was pretty minimal. Individual teachers going off to such experiences, typically a brief summer program, have come back to their classrooms by the many thousands; but they commonly lose their enthusiasm for reform before the year is out. Indeed, the morass that characterizes numerous school systems when it comes to fundamental change has so engulfed most teachers that after a year, even in their own classes, there is a serious retrogression. The new insights and approaches gleaned from institutes are rapidly lost. Reform has progressed as a reluctant snail!

Formal evaluation of institutes which might buttress our impressions has been seriously lacking. But the American Institutes for Research carried on Project Impact (1970) which included an evaluation of a number of previous NDEA institutes for the United States Office of Education. Its findings confirmed our concerns. While teachers generally have approved their institute experience, very minimal carry-over of any substantive change was evidenced by this study.

This limited carry-over has been a source of discomfiture for a number of educators, social scientists and funding agencies. One result has been active concern with the process or the design of the institute experience and a sense that the issues of institute design are probably as vital to the factor of long-term effect as is the subject-matter or content. The implementation programs of the Pre-college Education Division of the National Science Foundation offer a number of examples of efforts to encourage increased attention to these

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process questions without reducing careful attention to the academic content.

This article focuses on one of these NSF programs, the Resource Personnel Workshops, aimed at developing leadership cadres. It is hoped that such institutes may provide a more significant, long-term impact than had resulted from typical institute formats.

The Stanford Resource Personnel Workshops

Our case report is drawn upon the rewarding experiences of the authors over a period of three years where they co-directed Resource Personnel Workshops at Stanford University for high school social science personnel.

A number of basic assumptions (or hypotheses) shaped the overall design of the workshops. These served as decision guides through the three consecutive phases of the workshop experience: the pre-workshop period of recruitment, selection, and planning; the three-week summer session at Stanford; and the follow-through work of the ensuing academic year.

Assumptions Guiding Recruitment and Selection

The policy of *recruiting diverse-member participant teams* was the most powerfully determining factor in shaping the workshop. Rather than recruiting individual teachers and/or administrators from as many separate schools and districts, participants were recruited in teams of teachers and administrators from the same school district. Our goal was to develop a support system of colleagues representing different levels of the back-home organizational structure—a support system which could transplant itself to its district as a viable and self-maintaining unit with shared objectives and perspectives—with real potential for leadership in improving curriculum and instruction.

We considered the optimum team size to be five or six members, preferably three teachers, two administrators,[1] and one college sociologist or educator. It was important that the team be large enough to allow diversity in teaching experience and instructional style, as well as to include the varied role representation already mentioned. On the other hand, the group should be small enough to become a cohesive team within three weeks with minimal possibility of subgroup or clique formation.

[1] Usually comprised of one key "building-level" principal or assistant principal and a central office social studies supervisor or curriculum coordinator. Teacher members have represented one or more schools, depending upon district aims and size. In very large systems, teachers should not be overly dispersed.

We anticipated that the workshop experience might require a kind of role redefinition for many of the participants who took seriously the possibilities of the follow-up year. The experience of assuming and acting out a new role is often accompanied by uncertainties and doubts and sometimes by a growing sense of separateness from former colleagues. In such an instance, sharing team membership with others who are experiencing similar rewards and difficulties may be an important source of energy and support. Making available this source of support in the back-home system was a major motive in the recruitment of teams.

The second assumption guiding the selection process was that the single, most accurate predictor of team productivity in the follow-through year would be the degree of support guaranteed by the team's district. The selection process placed high priority on the amount and nature of *district support for the applicant team.* This included an assay of the system's previous record of activity in curriculum innovation. We also considered the degree to which a district would provide allowances and leave so that its team might work with local and state social studies councils, as well as with interested teachers in nearby school systems. (It was hoped that the college member of the team might help with certain of these arrangements and also plan for the utilization of the team in appropriate courses and programs on his campus.)

Since the single purpose of the total effort was to energize teams toward active dissemination and implementation work, it seemed clear that this endeavor could not be carried out unless the school district was in sympathy with the program and sufficiently interested in the potential gains from these efforts to support the team's work in a number of ways. It is certainly the case that some of the more important kinds of support forthcoming from a school district were of a nontangible and nonfinancial type—such as channeling communication and inquiries to team members, clearing the way of administrative and "red tape" obstacles to team activity, and the ready provision of facilities and equipment for demonstration sessions. Despite this fact, we used as an important index of district commitment its provision of financial support for the team. In all cases this support included the purchase of SRSS and other new social studies materials and the guaranteed provision of some released time for team members. Most teams came to the workshop with additional district support such as transportation to Stanford, retaining some team members on salary during the workshop or coverage of board and room expenses for some or all of the team members. The importance of district support of team effort seems clearly confirmed by comparing the quantity of team activity during the following year with the

budget expenditures for each team during the summer workshop.

With two exceptions, those teams receiving the lowest amounts of support from three categories of the summer workshop budget (stipend, transportation, and board and room) are teams reporting the highest number of dissemination-implementation events during the follow-through year. (The two exceptions are teams whose home districts are in the San Francisco Bay Area and did not receive extensive transportation or board and room support.)

Assumptions Shaping the Workshop Design

Four of these will be made explicit here.

1. The first of these consists of a cluster of *four learning objectives* around which the workshop content was shaped. Regardless of a participant's sophistication with respect to any of the four learning objectives when he arrived at the workshop, it was the staff's intent that he be afforded an opportunity to increase his knowledge and skill in each of these areas.

(a) The first objective was that each participant leave the workshop with an increased and usable understanding of the *process of inquiry learning*, or the rigorous application of the scientific method to social phenomena. It was important, further, that he extend his understanding of the essential indispensability of this inquiry process in a democratic pluralistic society. More specifically, we intended that each participant augment and refine his own repertoire of those instructional skills which support inquiry learning.

(b) A second intended gain for participants was greater *knowledge about the "new social studies"* as examples of inquiry-oriented learning materials.[2] This knowledge was to be gained by means of demonstration lessons, peer teaching, micro-teaching, and individual and group study. Participants were to become familiar with the materials and aware of ways in which they could be used in a variety of social studies courses and adapted to the learning needs and interests of particular students.

(c) A third gain projected for participants was an *understanding of the role of a change agent or helping agent*, a clear awareness of the skills constituting this role, and an increased facility in utilizing these skills. We expected that teams would take responsibility for actively sharing their knowledge of the "new social studies" with teachers in their home districts and encourage these teachers to consider positively the appropriateness and usefulness of these curricula in their own teaching. In most cases such consideration carries with it a necessary change in teaching style.

We felt it important that participants understand and be aware of the resistances and defensiveness commonly experienced by most of us when we consider changing anything as personally idiosyncratic as our own teaching style. A specific behavior change that we worked for was a decrease in the frequency and intensity of defense-provoking behaviors. We felt it essential that participants enjoy a style of interacting with others (students, teachers, administrators, and community personnel) which could contribute to a climate of decreasing defensiveness. The basic tenet, of course, is that the burden of feeling it necessary to defend the status quo reduces freedom to consider the possibility of change.

Workshop activities designed with these learning gains in mind included a number of skill practice exercises, role-playing and simulation experiences, analytic consideration of school and community organizations, and some brief theoretical inputs on the theory and stages of planned change.

(d) The final gain we felt essential for workshop participants was the *development of team membership and maintenance skills*. Despite the fact that many teams arrived at the workshop with a fairly high degree of acquaintance, we worked to make very explicit the process of team development and the skills contributing to team maintenance. We thought of the team as a group of colleagues who hold in common certain objectives and commitments and have agreed on the means by which they will move toward these objectives. Much of the teamwork at the workshop was devoted to making an actuality of this statement—to helping members develop a consensus on their objectives and agreement on the means by which they hoped to achieve these goals. We also wanted to aid team members in identifying their respective skills and resources and in recognizing how they are complementary. Further, we intended that teams develop a norm of giving active support and acceptance to each other in their respective endeavors. It was important that participants would come to recognize that group problem-solving is often more effective than the efforts of any single individual. Finally, it was our hope that teams would develop a commitment to examine their own process of interaction and sustain a continuing and shared search for ways of making this process more productive and more rewarding for each member, as well as for their projects.

2. The second major policy guiding the institutes was

[2] The first two workshops gave priority attention to Sociological Resources for the Social Studies (SRSS). The third workshop attempted to give equal focus to the Anthropology Curriculum Study Project (ACSP), the High School Geography Project (HSGP), and SRSS.

that of *sharing responsibility for workshop governance* with the participant group. This included the regular and frequent solicitation of feedback from participants on various aspects of the workshop experience, as well as the relevance of the program to the participants' own learning goals. Other aspects of this process of shared governance included the creation of a public forum for decision-making, either by means of open staff meetings which might be attended by any or all participants or by a more formalized steering committee. In 1971 all ongoing decisions were made by a steering committee of staff and participant representatives.

Our consistent practice was to review the summary of participant feedback with the total workshop group. We saw this as essential to the process of legitimizing the potentially wide spectrum of opinion and preference held by a group of this size. Some participants invariably counted this an ill-advised use of workshop time. Participants often seemed most resistant to the review of feedback at times when the group was most divided in its reactions and recommendations on workshop policy; it was at precisely these times we felt it most important to help each sub-group recognize and understand the views of other participants.

An important purpose was to share with the participants as social scientists the experience of studying our own immediate social system, the social system of the workshop. Our intent was that workshop members would profit from this experience both as social scientists studying a social system and as developers and managers of social systems in their own classrooms and/or schools.

3. A third policy giving shape to the workshop was that of *using participants as resources for learning*. We hoped that participants could grow in their active recognition and utilization of colleague teachers as aides and resources. A series of "Free University" sessions led by participants and staff included simulation demonstrations, lessons from other new social studies curricula, and demonstration and sharing of widely varied materials developed and tested by members in their own classrooms. Participants reacted positively to these sessions and cited them as initiating informal dialogue about a number of back-home issues.

4. The fourth policy decision guiding the workshop design was that each participant, regardless of back-home role, would do some *active teaching of a new curriculum* using an inquiry approach. These teaching experiences included micro-teaching sessions with high school students and peer teaching occasions when participants presented a lesson to fellow workshop members. After the first summer workshop the staff felt it a mistake to have arranged that the micro-teaching be done by teams. In the following workshops the micro-teaching and peer teaching was done in cross-team groups; we felt this a more productive arrangement. Participants seemed freer to try new approaches and materials, more vigorously invested in critiquing and redesigning a lesson and less active in defending a particular plan. The use of cross-team teaching groups also contributed to a higher level of colleagueship within the total group.

5. A fifth policy decision was that workshop members have *training and experience in designing participative, experiential demonstration sessions for adults*. We anticipated that the back-home implementation process would in most cases be initiated by a demonstration session for a group of social studies teachers, administrators, or community residents. We hypothesized further that an initial demonstration session would be more effective in attracting both interest and support if it provided those attending the session an opportunity to participate actively and to sample the kind of learning experiences that a student using the SRSS materials might have. While most of our participants came with a successful history of designing learning experiences for students, we felt that few of them had had experience in the design and execution of "one shot" demonstration events of a participative nature for adults. The workshop curriculum gave specific attention to this skill of micro-designing.

6. Emphasis on *team planning for the follow-through year* gradually increased, and during the third week this was virtually the exclusive focus of the workshop. Staff members attempted to serve as consultants to teams, encouraging them to recognize the unique resources as well as the needs of their back-home area and to build their plans around these. Teams were asked to advance the detail of their overall plan to the specification of calendar dates for major events and the identification of particular responsibilities to be assumed by each team member.

In retrospect, the staff felt this to have been a highly important and productive period. We also felt it essential that teams accomplish this task during the workshop rather than attempting it after they return home. In most cases a norm of active adopting and adapting developed.

Macro-design Changes

The macro-design of the second and third workshops underwent major revisions (see following chart). These began with participants' feedback and staff critiquing during the workshop itself. An even richer source of guidance in the redesign process was the monitoring of

team activity during the following year and participants' suggestions given the perspective of several months' dissemination effort.

Six macro-design revisions seem sufficiently major to cite here.

1. Initial *learning and skill practice in group and interpersonal processes were carried out in cross-team groups* rather than in teams. Virtually all of the group process learning activities during the first workshop occurred within team groups. In retrospect, the staff felt this had restricted the freedom of participants to try out new behaviors and to give and ask for feedback as well as contributing to an unproductive competitiveness among teams. The design change meant that participants in the second and third workshops were seldom in team groups during the first seven days of the workshop. All of the initial and basic learning and skill practice sessions having to do with interpersonal and group process were carried out in cross-team groups. Wherever possible, a participant did this initial work in a group which included none of his other team members. The staff felt this change contributed greatly to participants' willingness to risk the trial of personal and group behaviors, as well as to their openness to feedback.

Revisions of the Workshop Macro-design

1970 Workshop	1971 Workshop	1972 Workshop
Virtually all work in teams or total group	Micro-teaching and group process in mixed groups	
Focus on back-home roles; special sessions for teachers, administrators, etc.	Minimize back-home roles	
College, university personnel attend full workshop	College, university personnel attend final week only	College, university personnel attend full workshop
No clinical experience with stranger adult groups	Mini-institute provides valuable clinical experience	
Focus on SRSS	Major focus on SRSS, but expanding attention to other new social studies	Major focus on ACSP, HSGP and SRSS
Design decisions by staff using participant feedback	Design decisions by steering committee of staff and participant representatives	Design decisions in open staff meetings using participant feedback
All participants attend all events; few options	Numerous Free University offerings by staff and participants	
No experience or precedent	Former participants as resource visitors; frequent reference to experience of 1970 teams	Former participants in participant-staff roles
SRSS Episodes taught by staff	SRSS Episodes learned via micro-teaching	ACSP, HSGP & SRSS taught by staff and learned via peer teaching

2. The *role identification of participants was minimized.* As compared with the first workshop, little or no attention was given to the back-home position of workshop members. In fact, the roster carrying this information was not distributed until very late in the workshop. Participants reported this as contributing to greater informality. Several teachers reported a gain in understanding and empathy for their own administrators as resulting from the opportunity to know rather well an administrator from another district without being reminded of his administrative role.

3. *Attention to other new social studies curricula and approaches.* Participant feedback during the first follow-up year cited so consistently the difficulty of having had exposure only to the sociology curriculum and wishing very much for a wider knowledge of new social studies curricula for the purpose of responding to clients' questions and inquiries that this became an important new development in the workshop format. During the second summer an intensive effort to introduce other new social studies was made by means of incorporating sessions led by participants, staff, and guest consultants. Most of these were offered in the Free University format. This wider attention to new social studies allowed participants to see the actuality of an inquiry approach as thematic in the new curricula. It also freed them from a sense of having to "sell" or push but a single new curricular program.

4. *Development of a Free University format and general emphasis on participant options.* The design of the first workshop included few options for individual participants; most of the activities and events of the first year's curriculum were presented with the expectation that all participants would be present. The staff, operating under this expectation, felt unable to accommodate the interests and requests of small groups of participants in its design revisions. Participants' feedback and staff reaction pointed to the desirability of a design allowing more recognition of individual interests and encouraging participants to share responsibility for their own learning. The result was a great effort to widen the options and alternatives for individual participants in the following years and to afford as much freedom of choice as possible. Translated into actual practice, this policy took the form of a fairly uniform program of single events offered for participants during the first four to five days of the workshop. The Free University and concurrent session options were instigated during the second and third weeks as teams undertook the task of developing their plans for back-home implementation.

5. One of the most important additions to the 1971 and 1972 workshops was *an invitational mini-institute for social studies teachers in the Bay Area.* The event was sponsored in conjunction with the Santa Clara County Council for the Social Studies and was held at a nearby high school. Attendance numbered approximately one hundred.

Each workshop team was responsible for designing, presenting, evaluating, and redesigning two presentations for the day's sessions. Each presentation was to include general information about a new social studies curriculum or project and to involve teachers in active utilization of a new approach and/or sample materials. The Santa Clara Council provided a panel of "visitor/evaluators" who critiqued each team's efforts.

Probably no other single event of the workshop contributed more to teams' confidence and perceptions of how they could prove useful resources to other educators. Participants of both workshops rated the mini-institute as highly valuable preparation for success in their back-home change-agent activities.

6. A sixth revision was the *utilization of former participants in successive workshops.* During the first workshop, both staff and participants were aware of the lack of experience and precedent; this awareness was at the same time an exciting boon and a painful handicap. The second and third workshops were strengthened in two ways by experienced participants.

As already mentioned, participants' suggestions played a major role in reshaping the workshop design. Several former participants were in attendance at each of the last two workshops, either as short-term "visitors" or as staff members. We were not fully satisfied with the ways in which we arranged for the resources of these alumni to be used; nevertheless, their enthusiastic and insightful reports contributed a vital sense of the possibility of the mission and of the potential rewards of this kind of work.

Assumptions Influencing the Follow-through Year

The staff has identified several premises that dictated to some degree the nature of the follow-through year.

A major characteristic of the year would be the *continued learning* by teams of skills and strategies appropriate to the change-agent role, as well as continued learning about and experience with inquiry teaching and the new curricula. Plans for follow-up conferences, and staff and inter-team visits were shaped with this objective as the primary concern.

As mentioned previously, we believed it essential that *each team develop its own program for action*—that the program fit the team's home situation as well as bear the stamp of each member's uniqueness. It has seemed

evident that a relationship exists between the sense of "ownership" experienced by each member with respect to the team plan and the energy the same member will find available for executing the plan.

The staff felt it of key importance to *encourage both the autonomy and initiative of each team.* Teams by and large made their own decisions about the nature and plan of each of their client contacts, as well as setting their own priorities for expenditure of the support budget available to them during the follow-through year. Wherever possible, the staff took the posture of responding to and supporting participants' initiative rather than assuming the initiative.

Continuing contact among teams was deemed valuable for maintenance of a support system as well as for the continued learning by participants. This inter-team contact was encouraged by means of informal communication between team members and by newsletters. Team exchanges and the visit of one team to another were even more important in this process. These exchanges took the form of the visiting team's serving the function of "outside consultants" to the colleagues of the resident team, or of two teams collaborating in sponsorship of a drive-in, invitational workshop. Regardless of the announced purpose of the visit, there was always an active exchange of practices and experience with the result that each team benefited by clarifying its objectives and renewing the strength of its commitment.

For many workshoppers the highlight of the follow-up year was a reunion of all the teams, held in late winter or early spring. These three-day conferences brought staff and participants back together for shared reports of successes and of difficulties encountered. Teams were frequently spurred ahead by enthusiastic accounts of their colleagues from other cities. The staff used these meetings for evaluative purposes and took this opportunity to introduce the teams to several other social science projects—for by this time the teams were being looked to in their areas as resource groups and they wanted more ammunition.

The most rewarding result of collaboration among neighboring teams has been the gradual emergence of leadership networks of social studies resource personnel in four states. For example, a Wyoming network is developing around two Stanford teams (1971 and 1972) and one trained at the 1972 University of Colorado RPW. Their impact is already being extended via close cooperation with the State Department of Education and social studies educators at the University of Wyoming and its Teacher Center. Three Arizona teams have attended the Stanford institutes (Phoenix, 1970; Tucson, 1971; and a state team in 1972); these participants are in the process of establishing a social studies network which can be responsive to diverse needs throughout the state. Each network is developing with the intent of becoming self-supporting. It is our estimate, at this point, that the creation of these extended teams may be the most valuable contribution of the RPW programs as models for the profession.

Finally, it has been our purpose to *encourage interested teams in the development of their own proposals* and procurement of independent funding in order to continue and expand their projects. At this writing, four such proposals have been developed and submitted for grants.

Conclusion

There is now evidence to suggest that we are witnessing the development of a significant, self-generating, professional movement. In moving beyond the formats and emphases of institute patterns characterizing the past half-century, these evolving RPW programs promise a dual contribution. In the first instance, there are indications of substantial dissemination of timely, new directions in our field; secondly, we believe this approach carries the seeds of long-term success for improved processes for in-service education, as well as for needed curricular implementation. Such RPW's offer no educational panacea; but with continuing appropriate modifications, they do merit materially extended trials.

NOTES

1. The colleagueship and competence of Allen Menlo, University of Michigan, were important factors in all three workshops. Other staff members making valued contributions were Paige Porter, Richard Mase, James Eckenrod, Roy Erickson, and Gary Knox.

   Since 1969 we have enjoyed an informal, lively, always instructive dialogue with colleague social scientists and educators who have also directed Resource Personnel Workshops. Those who have been particularly helpful in this regard include Jack Cousins, William Hering, Craig Kissock, Philip Schlecty, William W. Stevens, and George Vuicich.
2. From the growing body of literature on planned change, four sources have been most useful:

   Havelock, Ronald G. *A Guide to Innovation in Education,* Ann Arbor, Michigan: Institute for Social Research, University of Michigan, 1970.

   Havelock, Ronald G. *Planning for Innovation Through Dissemination and Utilization of Knowledge,* Ann Arbor, Michigan: Institute for Social Research, University of Michigan, 1970.

   Lippitt, Ronald, Watson, Jeanne and Westley, Bruce. *The Dynamics of Planned Change,* New York: Harcourt, Brace & Company, Inc., 1958.

   Miles, Matthew, "On Temporary Systems," Miles, Matthew B. (ed.). *Innovation in Education,* New York: Teachers College, Bureau of Publication, Columbia University, 1964, pp. 437-490.